



CARBON FOREST

Pour un stockage carbone durable

BRAZZAVILLE

12 SEPT 2025



MULTIFONCTIONNALITE

1. CARBONE

2. BIODIVERSITE

3. EAU (éco-hydrologie)

4. SOL

5. CLIMAT

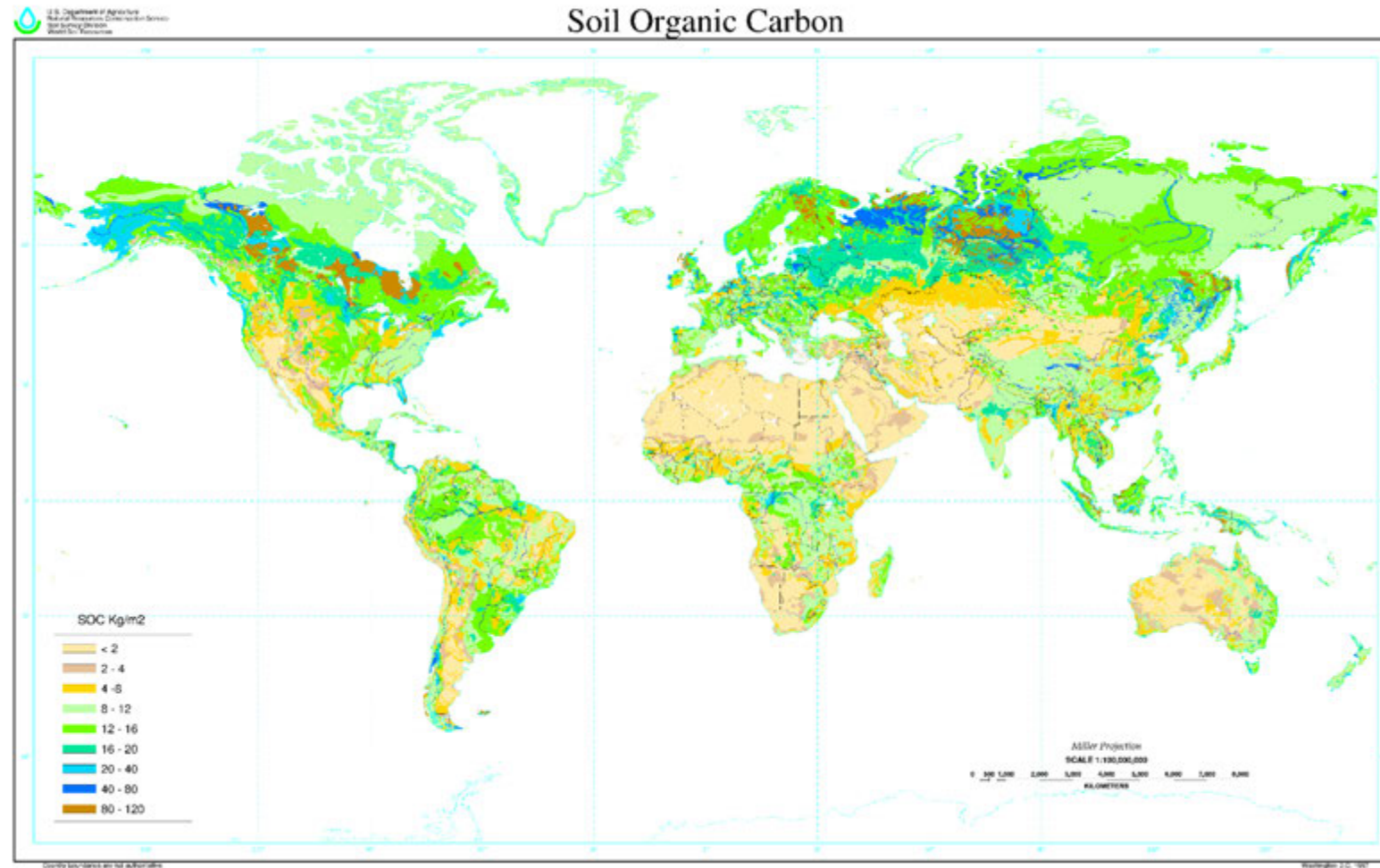
6. DEPOLLUTION

7. LUTTE CONTRE LES RISQUES

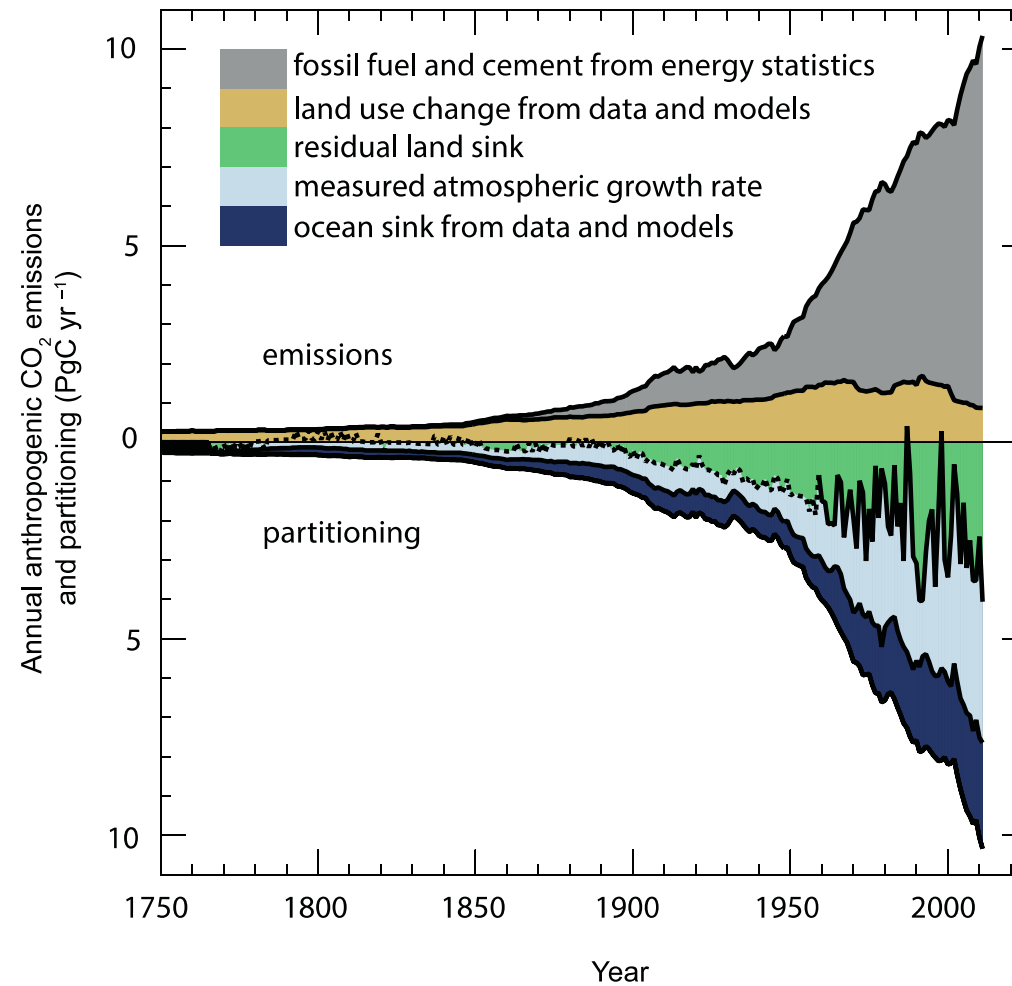
(tempête-incendie-biotique)

8. SOCIALE

Drivers of soil carbon accumulation



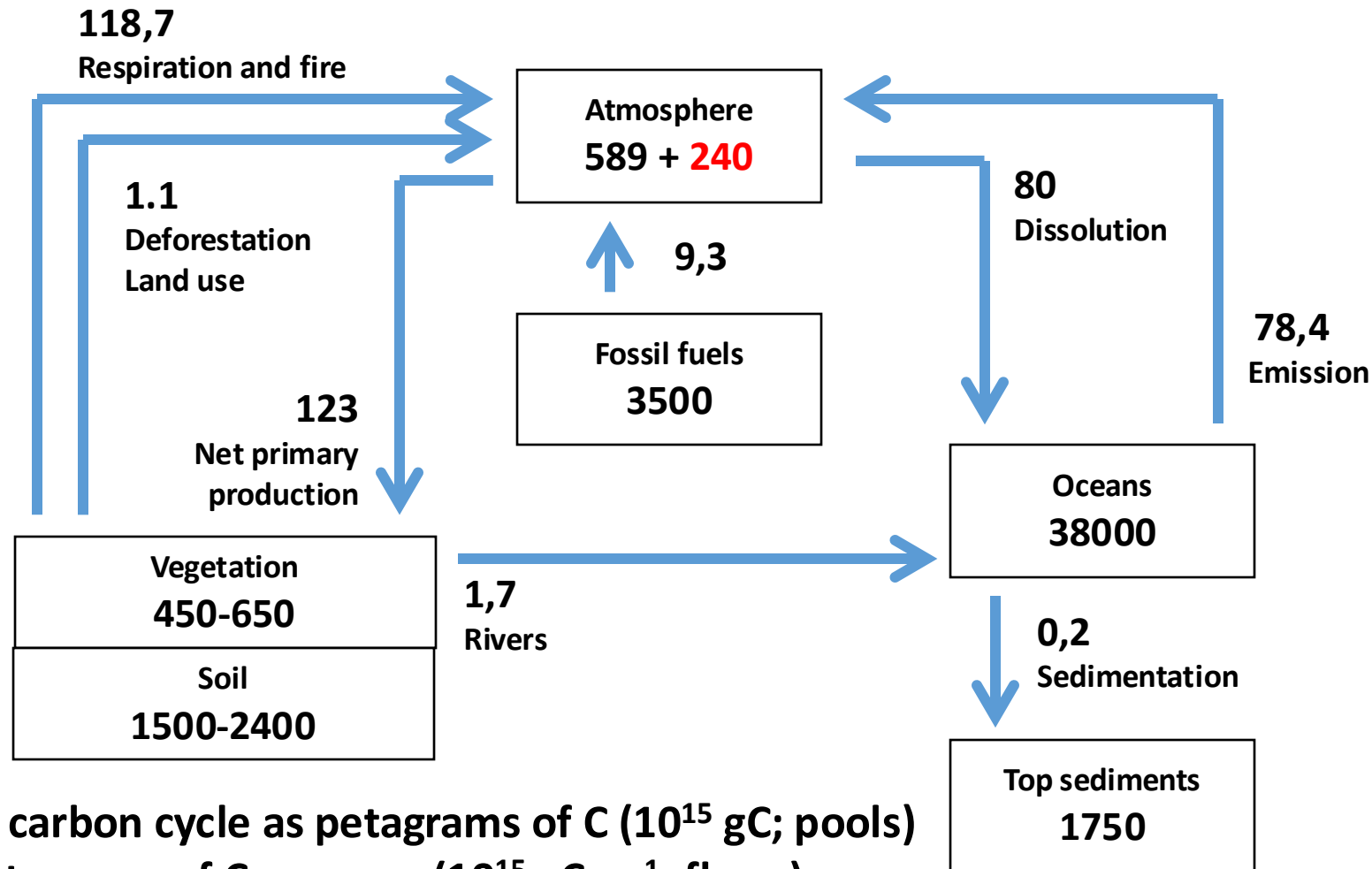
Origine et devenir du CO₂



IPCC, 2013. *Climate Change 2013: The Physical Science Basis*.
Cambridge University Press, Cambridge and New York

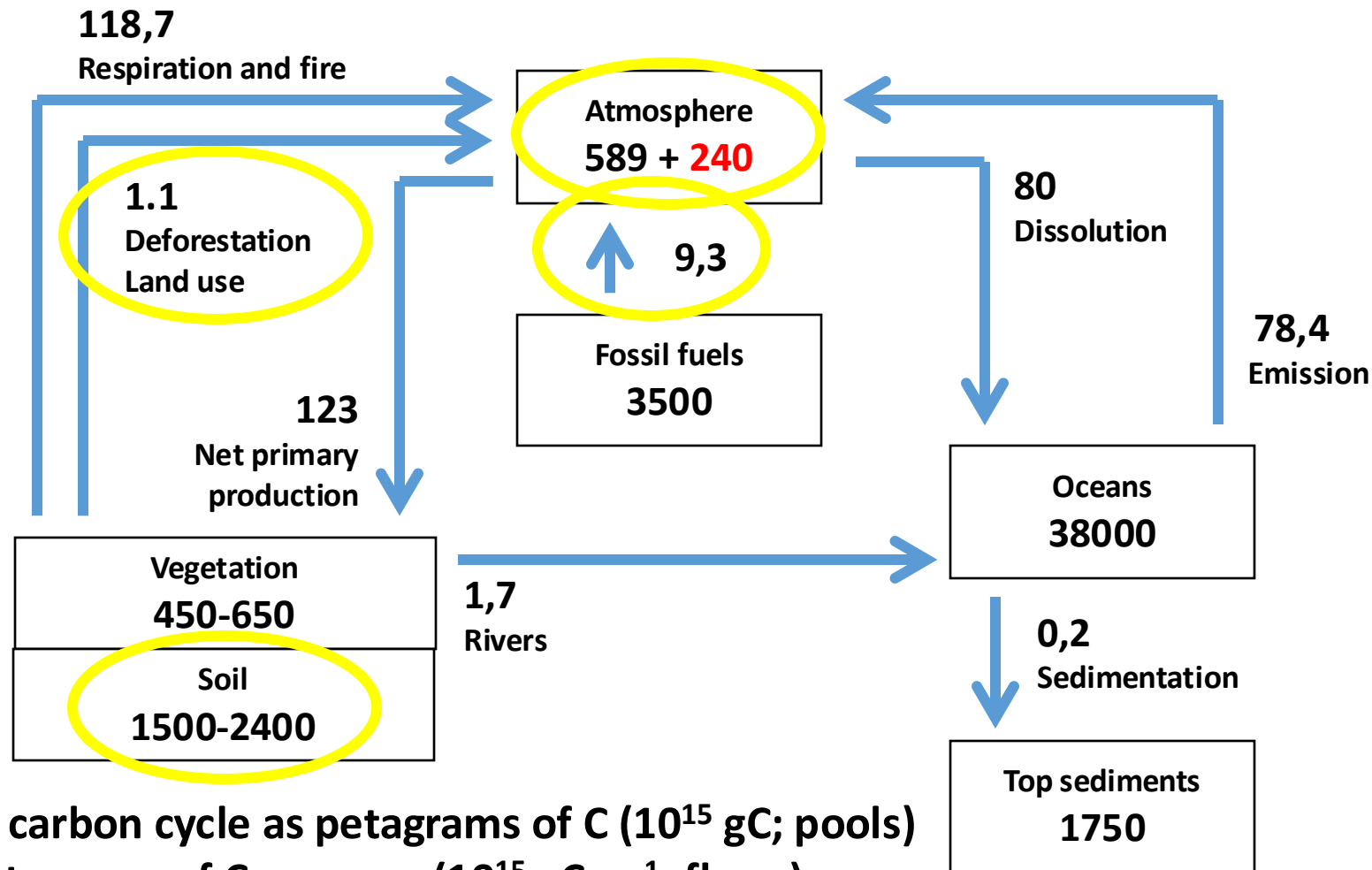
Institute of Ecology and Environmental Sciences - Paris

Cycle planétaire du carbone



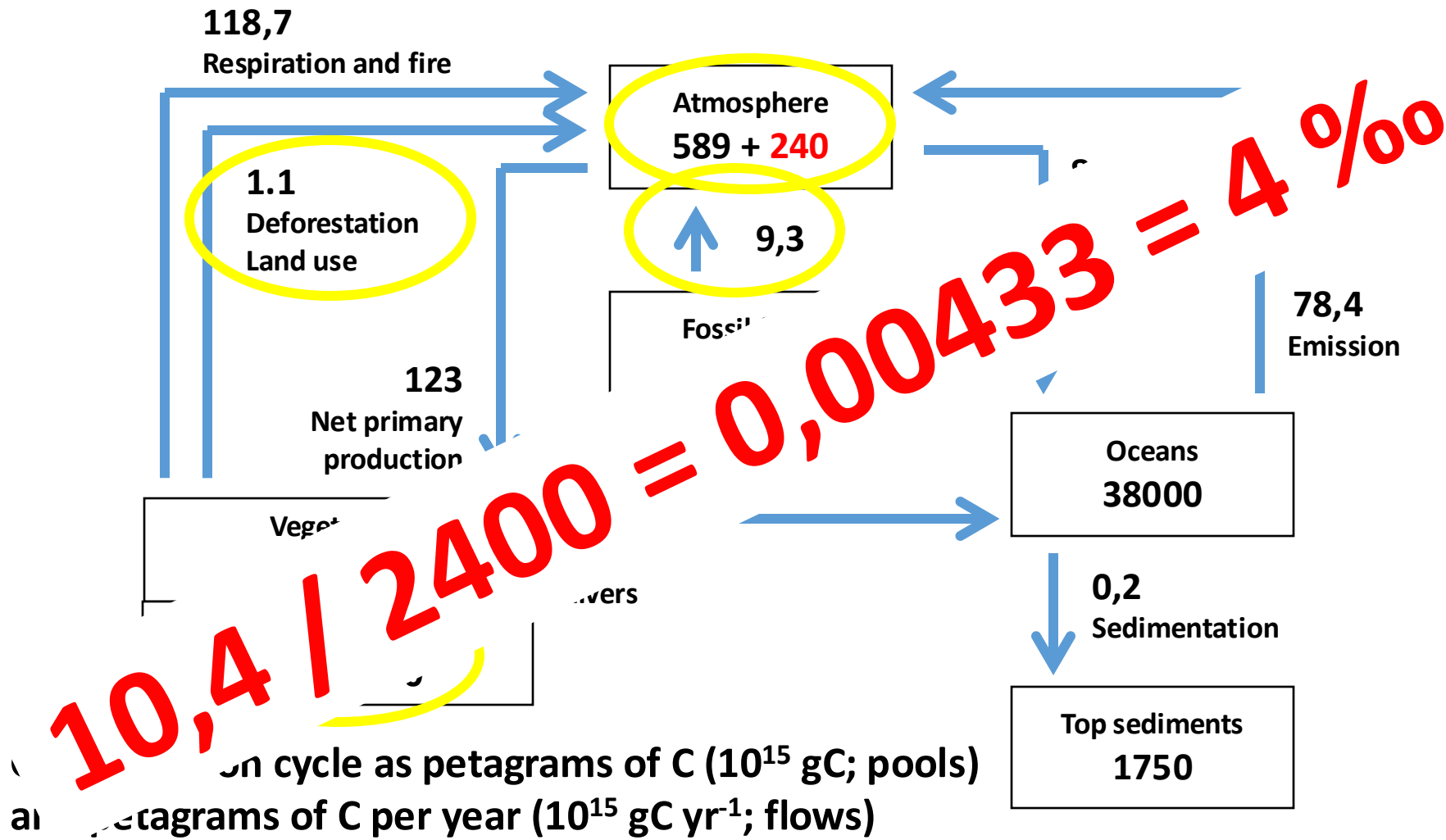
Global carbon cycle as petagrams of C (10^{15} gC; pools) and petagrams of C per year (10^{15} gC yr⁻¹; flows)

Cycle planétaire du carbone



Global carbon cycle as petagrams of C (10^{15} gC; pools) and petagrams of C per year (10^{15} gC yr⁻¹; flows)

Cycle planétaire du carbone



Institute of Ecology and Environmental Sciences - Paris

Couvert et carbone du sol

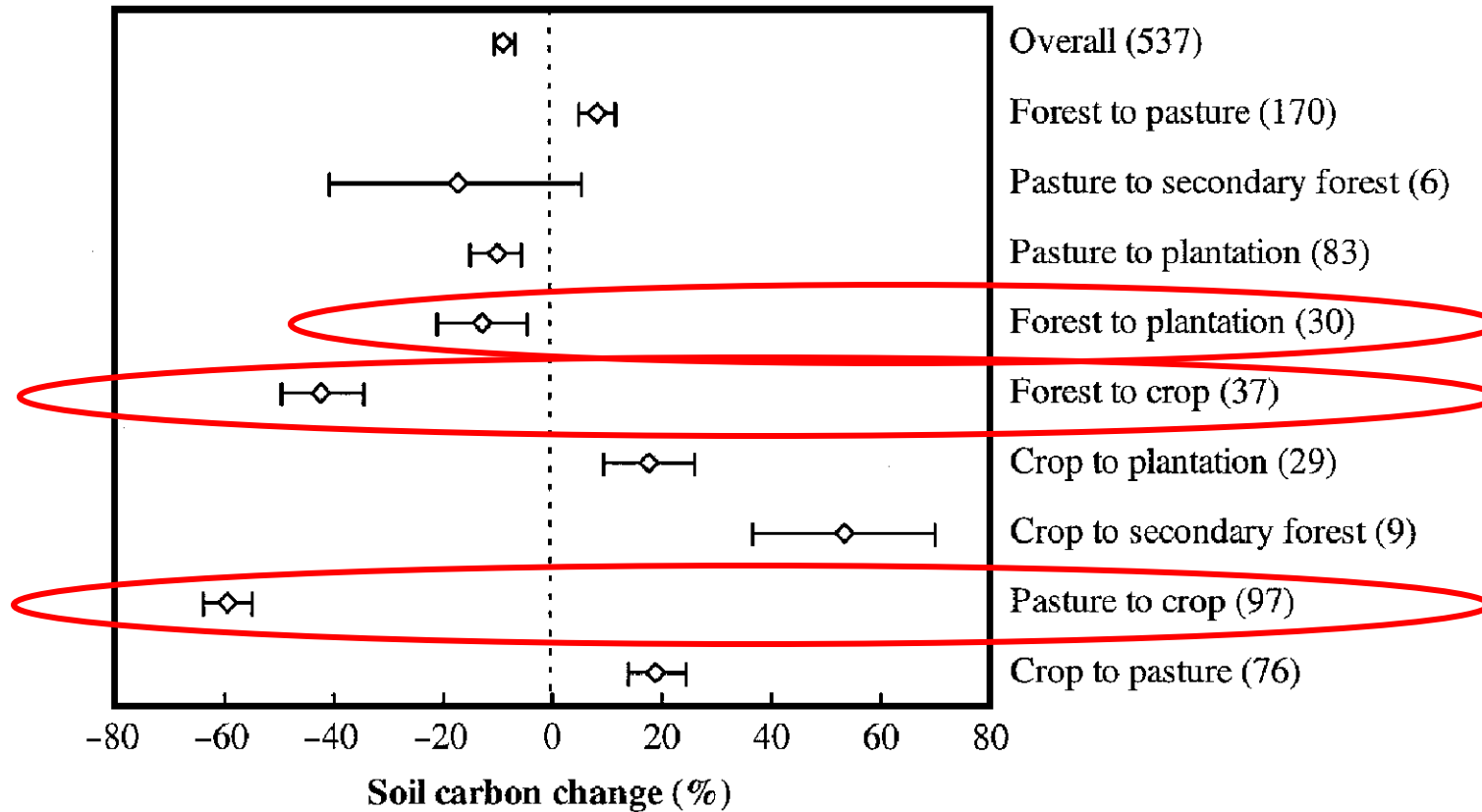
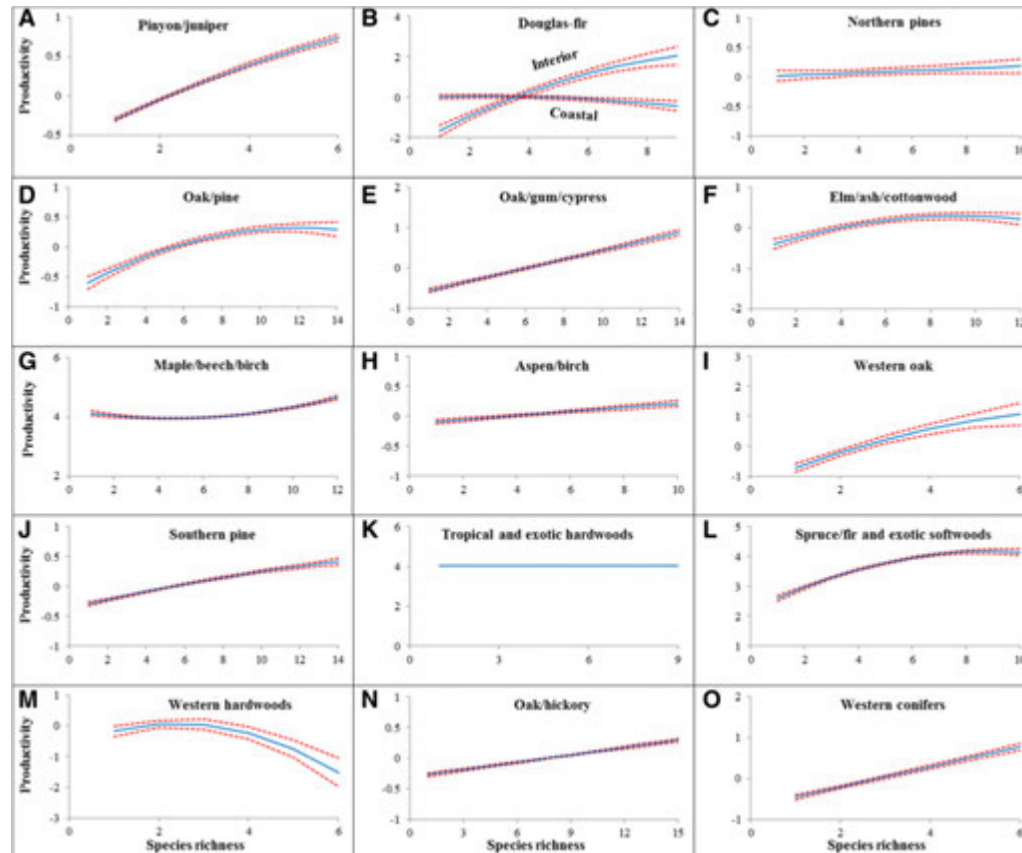


Fig. 1 Soil carbon response to various land use changes (95% confidence intervals are shown and numbers of observations are in parentheses).

Guo & Gifford 2002. *Global Change Biology* 8: 345-360

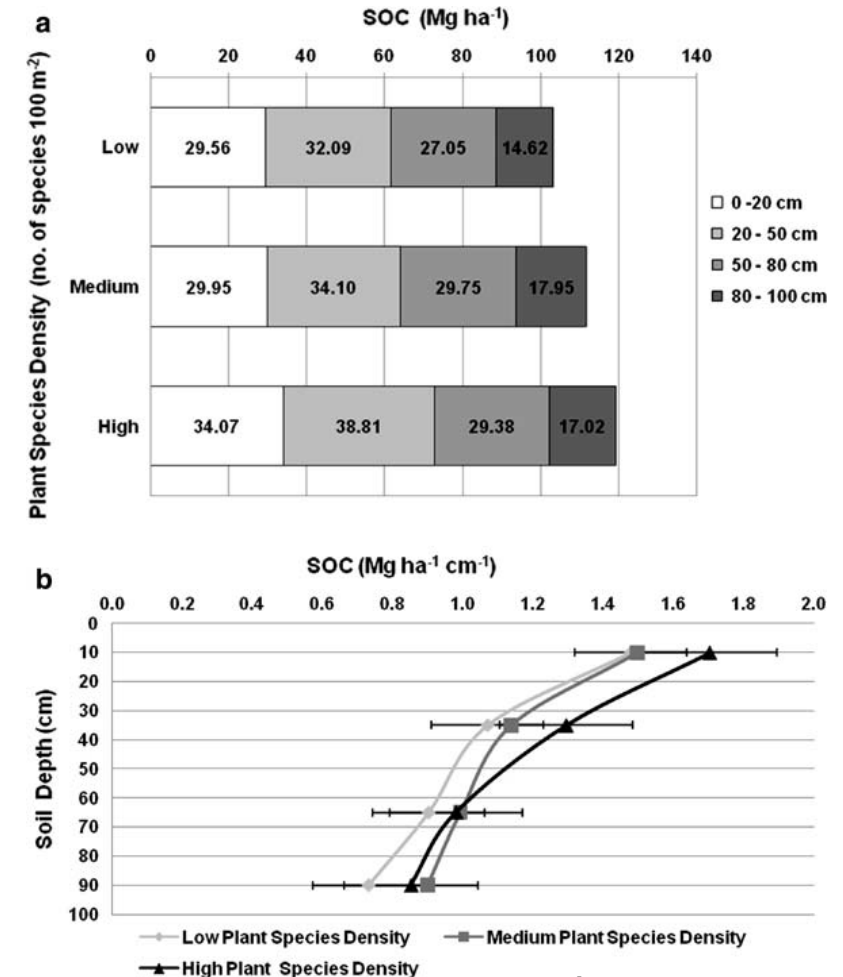


CORRELATIONS: 1/ BIODIVERSITÉ PRODUCTIVITE CARBONE

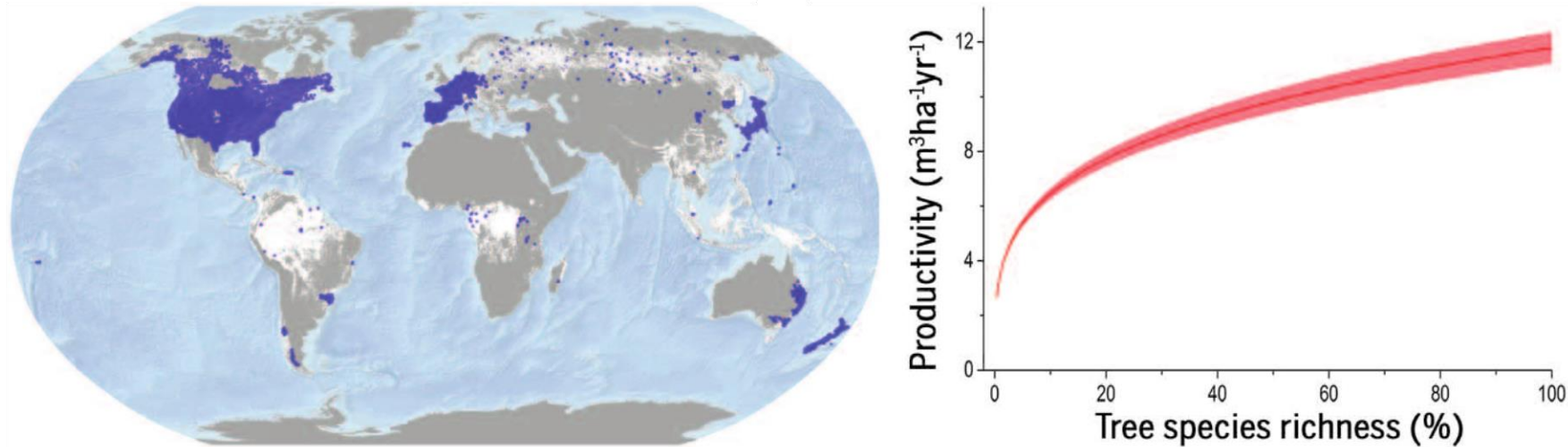


Watson et al.2015.ForestEcosystems2:22

2/ BIODIVERSITE



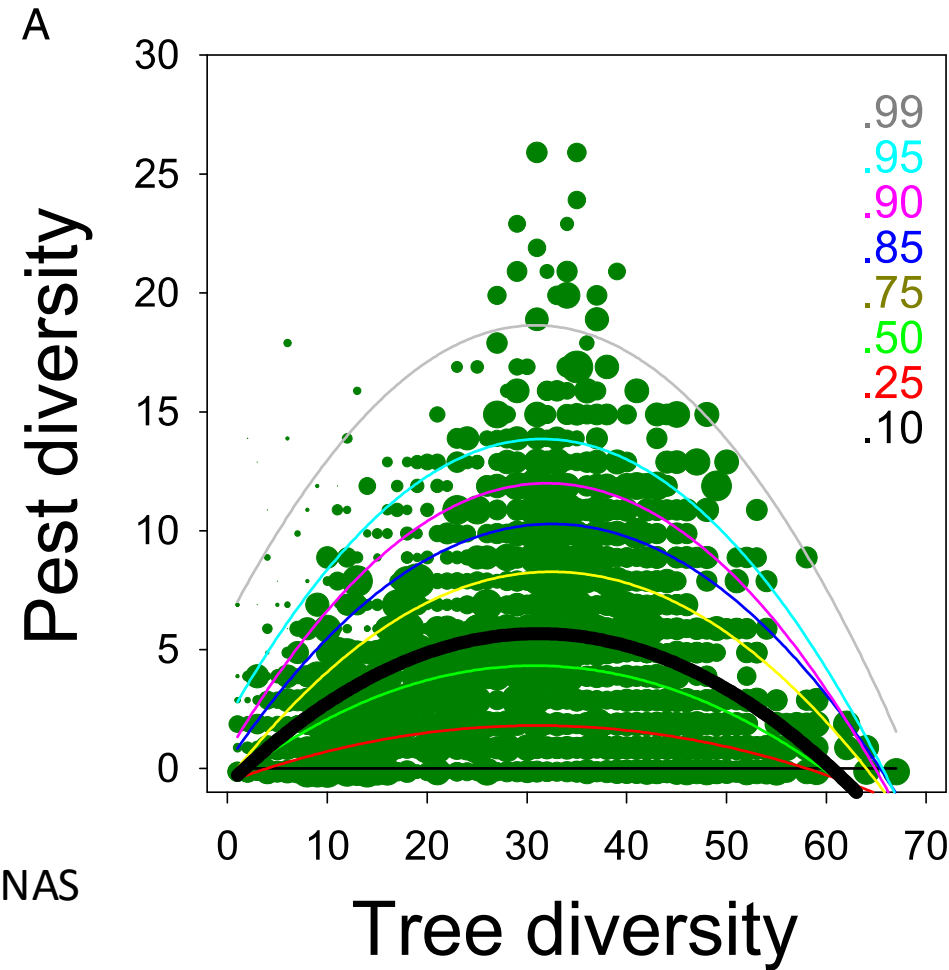
Biodiversité et productivité



Global effect of tree species diversity on forest productivity. Ground-sourced data from 777,126 global forest biodiversity permanent sample plots (dark blue dots, left), which cover a substantial portion of the global forest extent (white), reveal a consistent positive and concave-down biodiversity-productivity relationship across forests worldwide (red line with pink bands representing 95% confidence interval, right).

Liang J. et al. 2016. Science 354

Biodiversité et pathogènes

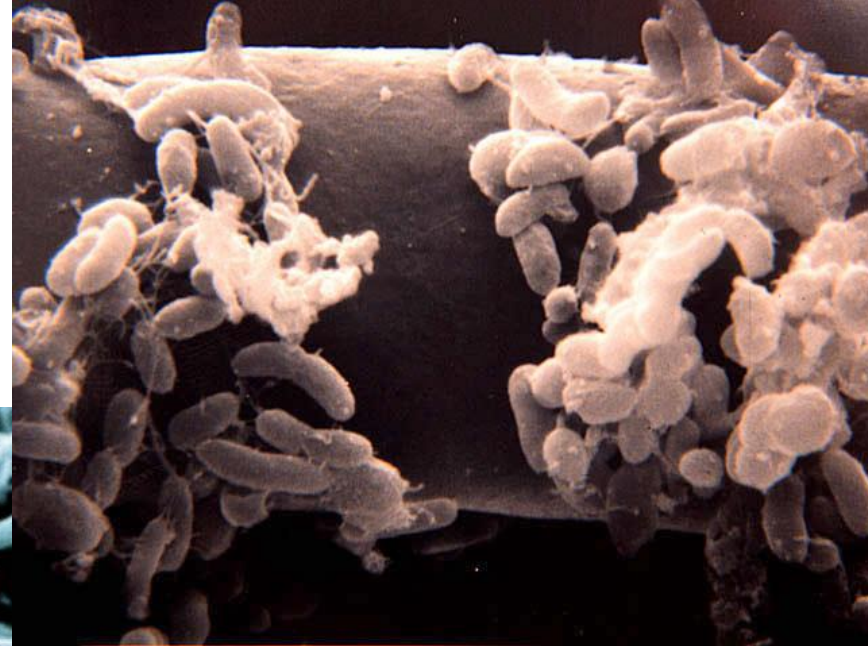
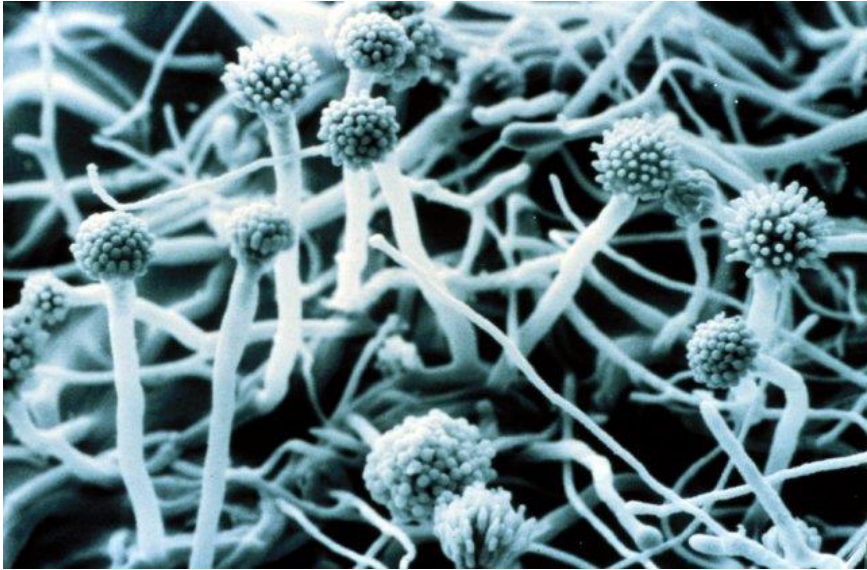


130,210
forest plots
in USA

Guo Q. et al. 2019. PNAS
116: 7382-7386.

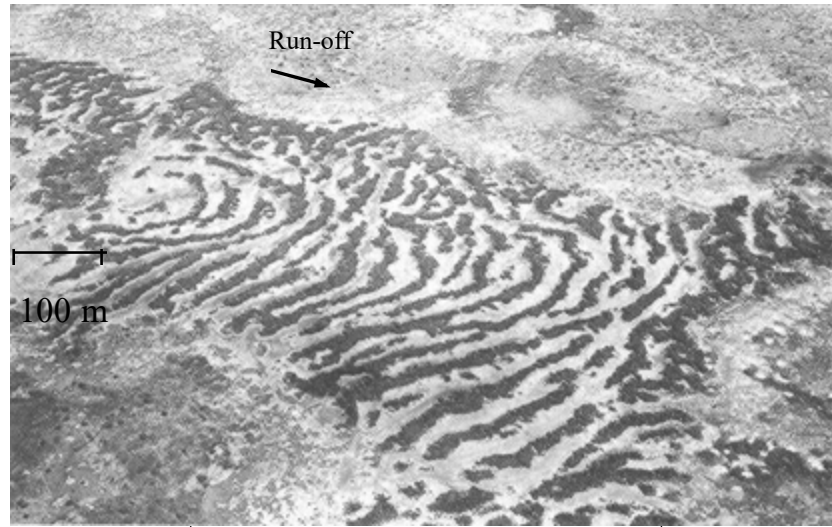
An environment full of life

Hundred meters of
mycelium per gram of soil ▼

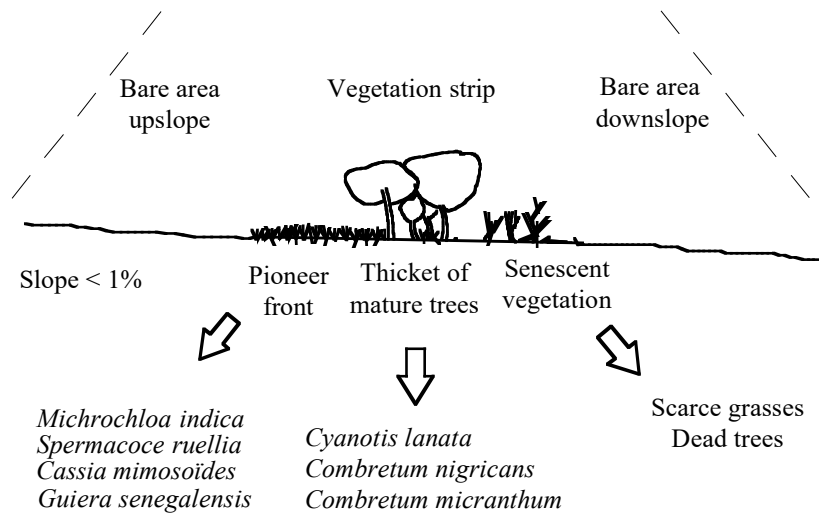


▲
Thousands of bacterial types, up
to 10^8 - 10^9 , even 10^{12} bacterial
bodies per gram of soil.

Drivers of soil carbon accumulation

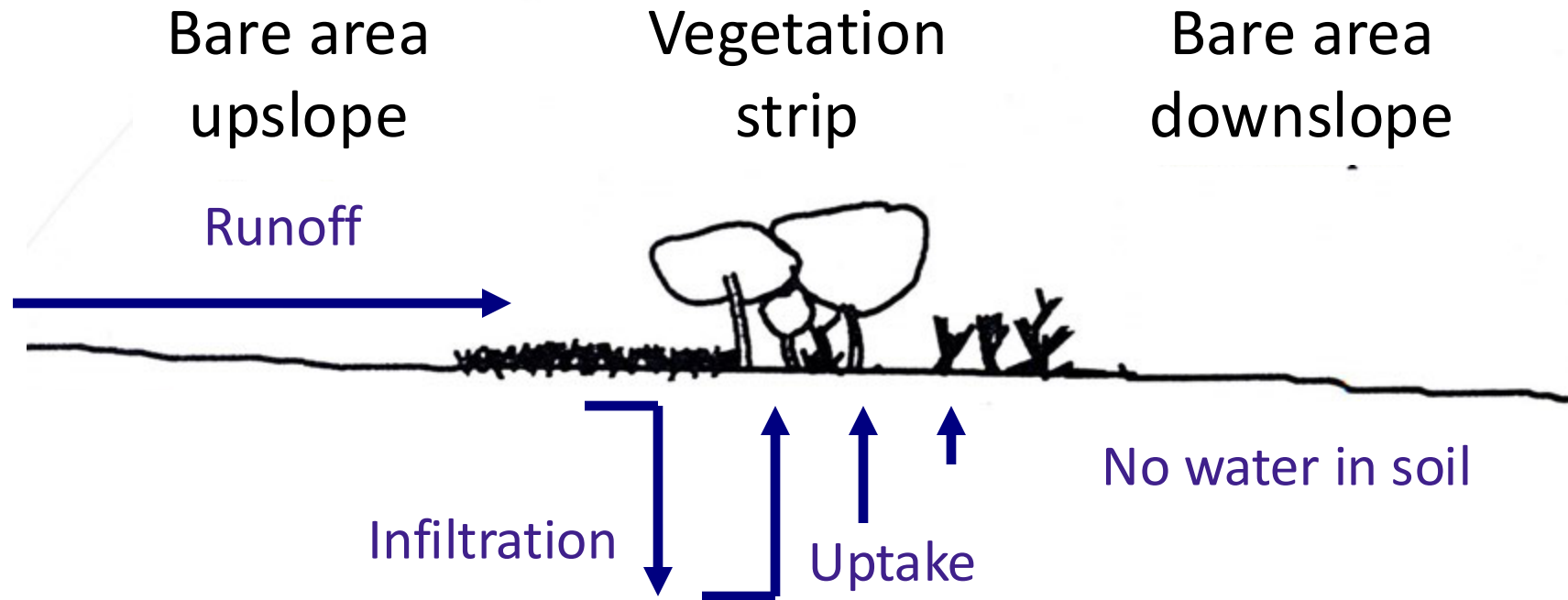


Tiger Bush in Niger

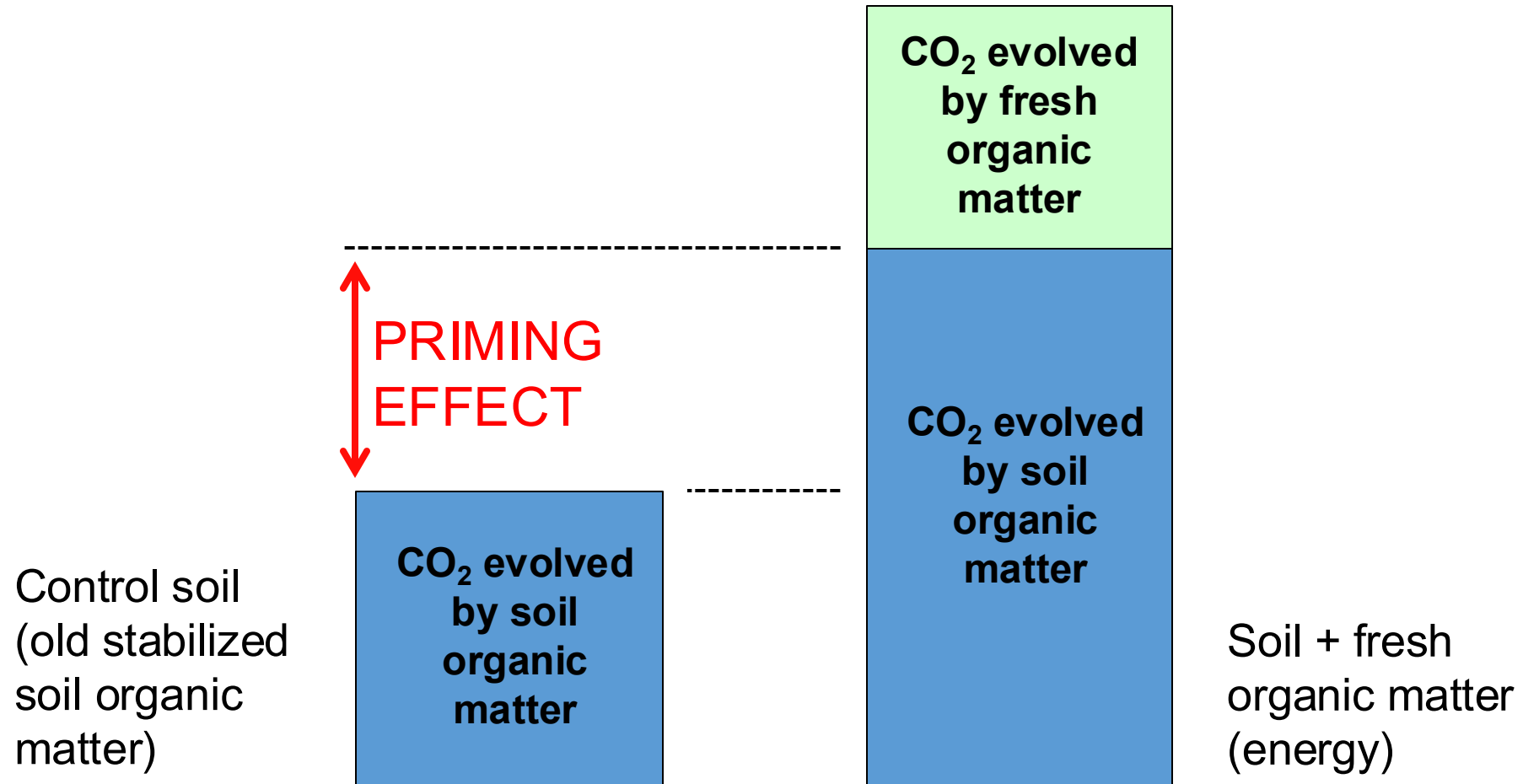


Guillaume K., Huard M.,
Gignoux J., Mariotti A.
& Abbadie L. 2001.
Oecologia 127: 295-304

Drivers of soil carbon accumulation



What is priming effect ?



Moins de priming en sol forestier

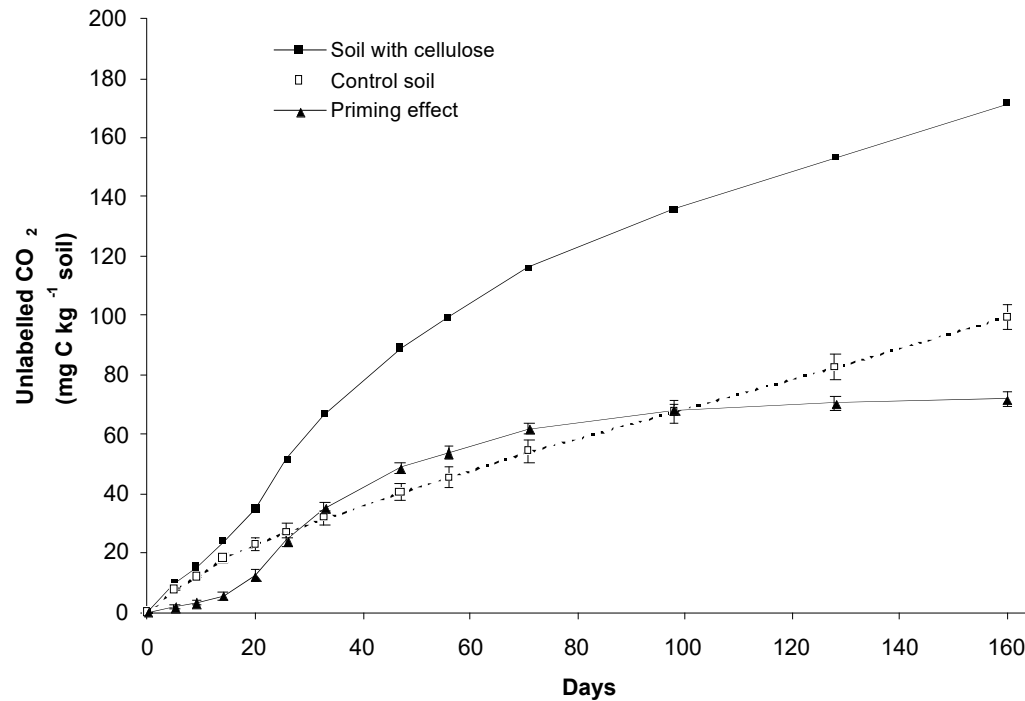
- Pas d'entrée de matière fraîche dans le sol.
- Décomposition en surface (perte d'énergie).
- Entrée de matière décomposée, pauvre en énergie dans le sol.

➡ Peu de priming effect



<http://www.forestiersdalsace.fr/fr/actualites/id-603-archive-1/actualites>

Priming effect and “stable” carbon

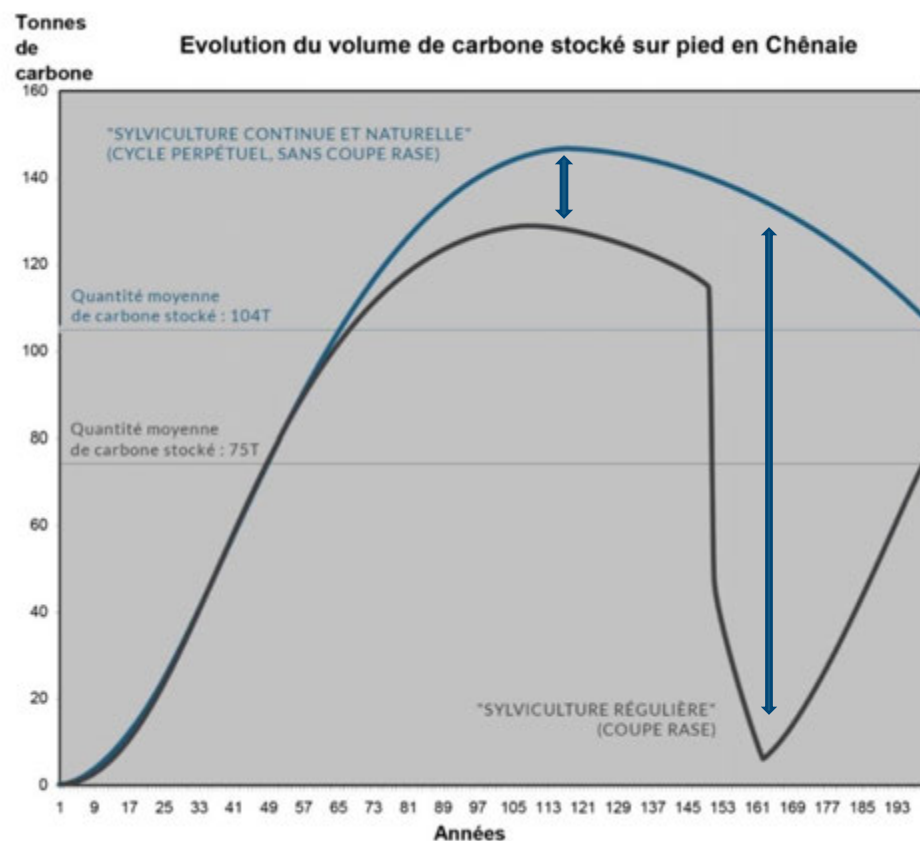


	Quantity (mg C kg ⁻¹)	¹⁴ C activity (pMC)	¹⁴ C age (years BP)
Control soil	100 ±4	97,3 ±2.5	222 (+202/-208)
Soil with cellulose	172 ±3	85 ±3	1329 (+253/-262)
Priming effect	72 ±2	73 ±3	2567 (+376/-395)

Fontaine et al. 2007.
Nature 450: 277-281



UN STOCKAGE EFFICIENT DU CARBONE



Carbon Forest prône une sylviculture douce, où la régénération est effectuée de manière diffuse, sans coupe rase :

39% de C en plus pour la sylviculture continue

Régénération automatique

Sylviculture continue et naturelle - Sylviculture avec coupe rase





LABEL BUREAU VERITAS

Notre projet est le premier Contrat Environnemental labellisé en France.
BUREAU VERITAS est chargé de la vérification et du contrôle de la méthode.
Option traçabilité opérationnelle courant 2021.



LABEL SOLAR IMPULSE

CARBON FOREST est labellisé comme solution efficiente en énergie.
CARBON FOREST est aussi membre fondateur du nouveau défi lancé par **Bertrand Piccard** : «The World Alliance for Efficient Solutions», qui sélectionne à l'échelle mondiale, les projets innovants, économes en énergie.



GENERALI assure nos contrats pour couvrir tout risque : incendie, tempête, biotique, etc. Nous sommes les seuls à offrir cette garantie.



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WORLD ALLIANCE
for EFFICIENT SOLUTIONS



IEES Paris

HL
HUGLO LEPAGE
avocats



Laboratoire
VECTOEUR





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